What is claimed is:

1.   A radiographic image conversion panel comprising:

a support; and

at least one photostimulable phosphor layer provided on the support,

wherein the photostimulable phosphor layer comprises a photostimulable phosphor having a columnar crystal structure, and the number N of columnar crystals per 100 μm^2 of the surface area of the photostimulable phosphor layer satisfies a following Formula (1):

Formula (1)

$50 \leq N \leq 4000$.

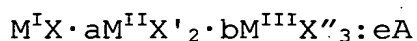2.   The panel of claim 1, wherein the number N of the columnar crystals satisfies a following Formula (2):

Formula (2)

$100 \leq N \leq 2000$.

3.   The panel of claim 1, wherein the photostimulable phosphor layer having the columnar crystal structure is formed by a vapor phase deposition method.

4.   The panel of claim 1, wherein the photostimulable phosphor layer contains a photostimulable phosphor having a composition represented by a following Formula (3):

Formula (3)

$$M^{I}X \cdot aM^{II}X'_2 \cdot bM^{III}X''_3 : eA$$

wherein the M^{I} is at least one kind of alkali metal selected from a group consisting of Li, Na, K, Rb and Cs, the M^{II} is at least one kind of bivalent metal selected from a group consisting of Be, Mg, Ca, Sr, Ba, Zn, Cd and Ni, the M^{III} is at least one kind of trivalent metal selected from a group consisting of Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Al, Ga and In, each of the X, the X' and the X'' is at least one kind of halogen selected from a group consisting of F, Cl, Br and I, the A is at least one kind of metal selected from a group consisting of Eu, Tb, In, Ga, Cs, Ce, Tm, Dy, Pr, Ho, Nd, Yb, Er, Gd, Lu, Sm, Y, Tl, Na, Ag, Cu and Mg, and each of the a, the b and the e represents a numeric value in a range of $0 \le a < 0.5$, $0 \le b < 0.5$ and $0 < e \le 0.2$.

5. The panel of claim 4, wherein the M^{I} in Formula (3) above is at least one kind of alkali metal selected from a group consisting of K, Rb and Cs.

6. The panel of claim 4, wherein the X in the Formula (3) is Br or I.

7. The panel of claim 4, wherein the M^{II} in the Formula (3) is at least one kind of bivalent metal selected from a group consisting of Be, Mg, Ca, Sr and Ba.

8.   The panel of claim 4, wherein the M^{III} in the Formula (3) is at least one kind of trivalent metal selected from a group consisting of Y, La, Ce, Sm, Eu, Gd, Lu, Al, Ga and In.

9.   The panel of claim 4, wherein the b in the Formula (3) represents a numeric value in a range of $0 \leq b \leq 10^{-2}$.

10.   The panel of claim 4, wherein the A in the Formula (3) is at least one kind of metal selected from a group consisting of Eu, Cs, Sm, Tl and Na.

11.   The panel of claim 1, wherein the photostimulable phosphor layer contains a photostimulable phosphor having a composition represented by a following Formula (4):

Formula (4)

CsBr:yEu

wherein the y represents a numeric value in a range of 1×10^{-7} to 1×10^{-2}.

12.   The panel of claim 3, wherein a growth angle of the columnar crystals is from 0° to 40°.

13.   The panel of claim 12, wherein a growth angle of the columnar crystals is from 0° to 35°.